Remarks

Claims 1-13 & 16 are pending in this application and were previously rejected. Applicant would like to thank the Examiner for her comments during the telephone conference of 16 May 2005 with respect to her understanding of the cited Fielden reference.

The Examiner has rejected claims 1-13 under 35 U.S.C. 103(a) as obvious in light of Fielden et al. (US 20020102749A1) in combination with Otsuka (US 5,438,952). Applicant respectfully asks the Examiner to reconsider this rejection in view of the below Remarks.

Fielden relates to methods and systems for monitoring semiconductor fabrication. Such systems may include a stage configured to support a specimen coupled to a measurement device to perform inspection techniques. For systems which include a calibration ellipsometer, a reference layer on a specimen may be generated by the calibration ellipsometer.

Otsuka relates to a method of fabricating a compound semiconductor device which includes the steps of supplying an amine-adduct of a compound that contains a constituent element of a crystal layer that forms the semiconductor device, to a substrate on which the semiconductor device is formed, as a source material of the crystal layer, decomposing the amine-adduct in the vicinity of the substrate such that the constituent element is released, and depositing the constituent element on the substrate to cause a growth of the crystal layer on the substrate.

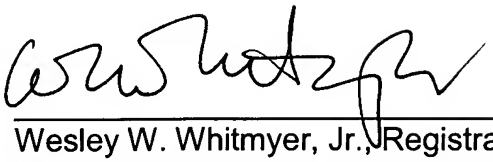
The present invention is directed to a method of depositing crystalline layers on a crystalline substrate where one or more calibration layers are deposited in the same production run as the active layer. Thus, to determine the magnitude of calibration pa-

rameters, before the active layer is deposited; one or more calibration layers are deposited on the substrate or on a buffer layer which has been applied to the substrate.

Claim 1, the only independent claim of the present invention, requires, among other elements, that the starting substances are deposited on the substrate and form an active layer. . . [and] at least one calibration layer, the layer properties of which are measured or determined, being deposited in the same production run. Accordingly, the calibration layer and the active layer are deposited in the same production run. Nowhere does Fielden or Otsuka suggest depositing an active layer and one or more calibration layers in the same run, thus Fielden and Otsuka taken alone or in combination fail to teach each and every element of the claimed invention, and the claimed invention is not obvious.

The only motivation that the Examiner has provided for finding the invention obvious in light of Fielden is that Fielden teaches forming a reference layer which the Examiner alleges is similar to applicant's calibration layer. However, Applicant respectfully submits that the present invention requires more than simply having a reference layer such as one generated by an ellipsometer. The present invention provides a novel method of depositing a calibration layer and an active layer in a single run; thus gaining the capability of modifying the active layer during the run. This is achievable by growing a calibration layer prior to the active layer in the same run. The only reference layer of Fielden relates to a reference layer generated by the ellipsometer. As such, the reference layer of Fielden is not separate from the active layer. Fielden either alone, or in combination with other references, fails to provide any motivation to include a calibration layer as described in applicant's invention, thus the claimed invention is not obvious.

Respectfully submitted,



Wesley W. Whitmyer, Jr., Registration No. 33,558
Michael W. Krenicky, Registration No. 45,411
Attorneys for Applicant
ST.ONGE STEWARD JOHNSTON & REENS LLC
986 Bedford Street
Stamford, CT 06905-5619
203 324-6155